

# A Multidisciplinary and Multimodal Approach to Catheter-Associated Urinary Tract Infections

Carolyn L. Davidson RN, PhD

*Lehigh Valley Health Network, Carolyn\_L.Davidson@lvhn.org*

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# A Multidisciplinary and Multimodal Approach to Catheter-Associated Urinary Tract Infections

**CA-UTI Reduction Quality Improvement Team**  
Lehigh Valley Health Network, Allentown, Pennsylvania

## Purpose:

To organize a multidisciplinary team of professionals committed to implementing a network standard for Urinary Catheters through the multi-modal processes of education, foley bundle, insertion and maintenance criteria, and development of a clinical practice guideline.

## Background:

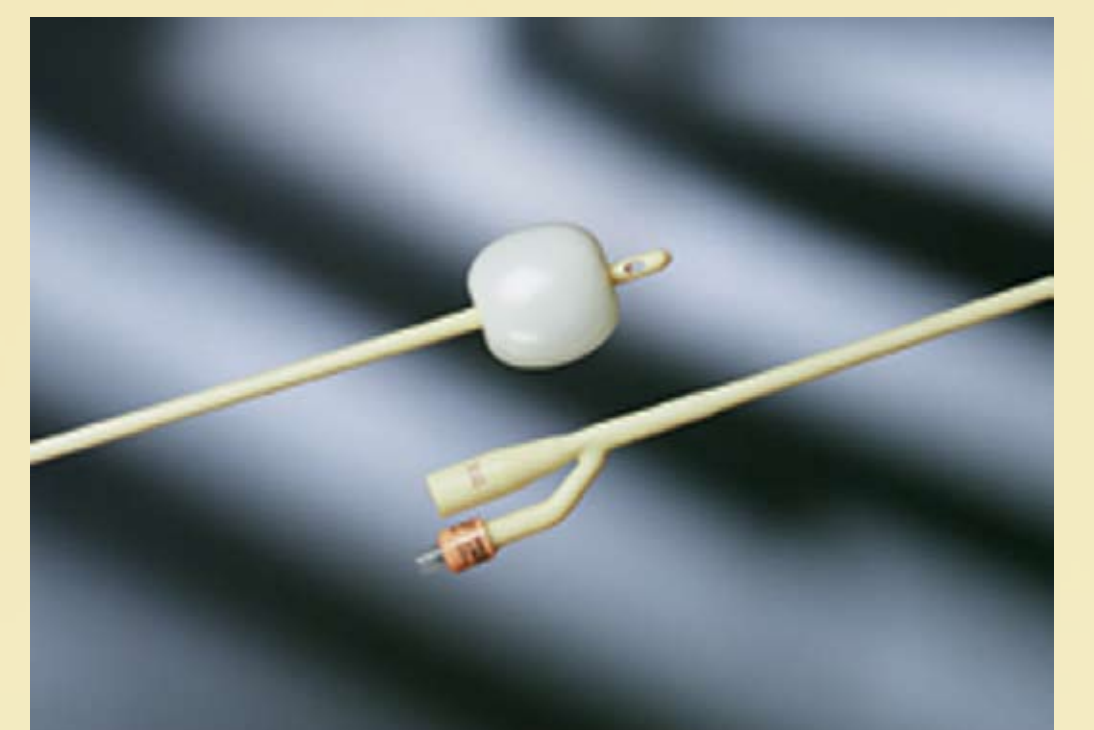
- 30-40% of all hospital-acquired conditions are attributed to Urinary Tract Infections (Klevens, 2007)
- 1 in 4 hospitalized patients receive an indwelling catheter; 50% are unnecessarily placed (Wald, 2008)
- 86% of patients undergoing major surgery will have urinary catheters placed and half remain in place more than 2 days (Wald, 2008)
- 2%- 4% of UTIs Progress to Blood Stream Infection (BSI) (Tambyah and Maki, 2000)
- CA-UTI affects > 1 million patients/yr accounting for
  - \$400 million to \$3 billion in healthcare costs (Klevens, 2007)

## Methods:

- Develop Clinical Practice Guideline
  - Indications, insertion, maintenance, irrigation, specimen collection, alternatives
- Establish 'Foley Bundle'
- Education and Re-Education (Safday & Abad, 2008)
  - Didactic with a focus on the basics
  - Return demonstration of insertion and maintenance care
- Define metrics
  - NHSN Benchmark
  - Root Cause Analysis with each event (attached)
- Collaboration with Urology services
  - Coudé Catheters for males with a history of prostate disease
  - Urology consult with 3 failed attempts at catheter insertion
- Affix a checklist of indications on all urinary catheter trays
- Ongoing attention by the multidisciplinary team to evolving evidence and/or best practices

**'Foley Bundle'** - A 'bundle' is a group of care practices that when implemented together will result in better patient outcomes.

- Daily reminder to clinicians
- Aseptic insertion and maintenance
- Appropriate indication for insertion
- Consider alternatives to indwelling catheter
- Catheter securement device



## Results

## Conclusions

- Recognize and reward
- Ongoing surveillance of practice variances supports outcomes
  - Unit observations ("Gemba walks")
- Expansion of order sets that include pre-defined time limits for removal of indwelling urinary catheters will accelerate progress
- Enhance collaboration with Perioperative and Emergency Services for insertion indications to eliminate unnecessary catheterizations

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